

AMENDMENT**IN THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Amended) ~~A method of look-up table in an imaging system, said method~~ comprising:

receiving a digital signal having a high-bit portion and a low-bit portion;

subjecting said high-bit portion of said digital signal to a curve table for look-up mapping to get a high-bit signal;

subjecting ~~partial a portion of~~ said high-bit portion to a slope table for getting a factor;

calculating said low-bit portion of said digital signal with said factor to get a low-bit signal; and

combining said high-bit signal with said low-bit signal to get an output signal.

2. (Original) The method according to claim 1, wherein said high-bit portion comprises a most significant bit of said digital signal.

3. (Original) The method according to claim 1, wherein said low-bit portion comprises a least significant bit of said digital signal.

4. (Amended) The method according to claim 1, wherein said ~~step of~~ subjecting ~~partial~~ said high-bit portion comprises:

dividing a curve into a plurality of differential time zones, said curve related to a plurality of mapping values in said curve table;

generating a plurality of slope values according to said differential time zones; and

storing said slope values into said slope table for mapping ~~partial~~ said portion of said high-bit portion.

5. (Original) The method according to claim 4, wherein said curve comprises a gamma curve for gamma correction of said imaging system.

6. (Amended) The method according to claim 1, wherein said calculating ~~step~~ is to do multiplication with said factor and said low-bit portion.

7. (Amended) ~~An apparatus of for mapping a look-up table for reducing memory usage of an imaging system,~~ said apparatus comprising:

high-bit mapping means response to a digital signal for receiving and mapping a high-bit portion of said digital signal to output a high-bit signal;

low-bit calculation means response to said digital signal for receiving and calculating a low-bit portion of said digital signal to output a low-bit signal; and

combination means for combining said high-but signal with said low-bit signal to output an output signal for a controller.

8. (Amended) The apparatus of claim 7, wherein said low-bit calculation means comprises:

zone-factor mapping means ~~response to partial said high bit portion~~ for mapping ~~partial a~~ portion of said high-bit portion with a slope table and outputting a factor; and

calculation means for doing multiplication of said factor and said low-bit portion.

9. (Original) The apparatus of claim 8, wherein said slope table comprises a plurality of slope values that are calculated by differentiating a gamma curve stored in said high-bit mapping means.

10. (Original) The apparatus of claim 9, wherein said gamma curve is divided into a plurality of differential zones for calculating said slope values.

11. (Original) The apparatus of claim 7, wherein said high-bit portion of said digital signal comprises a most significant bit of said digital signal.

12. (Original) The apparatus of claim 7, wherein said low-bit portion of said digital signal comprises a least significant bit of said digital signal.

13. (Amended) The apparatus of claim 7, wherein said imaging system apparatus comprises a scanner.

14. (Amended) A storage-memory device used for use in an imaging system, said storage-memory device responsible for mapping look-up table and enabling to execute being configured to execute the following steps:

receiving a digital signal having a high-bit portion and a low-bit portion;

subjecting said high-bit portion of said digital signal to a curve table for look-up mapping to output a high-bit signal;

subjecting ~~partial~~ a portion of said high-bit portion to a slope table for outputting a factor;

calculating said low-bit portion of said digital signal with said factor to output a low-bit signal;

and

combining said high-bit signal with said low-bit signal to output an output signal.

15. (Original) The storage-memory device according to claim 14, wherein said high-bit portion comprises a most significant bit of said digital signal.

16. (Original) The storage-memory device according to claim 14, wherein said low-bit portion comprises a least significant bit of said digital signal.

17. (Amended) The storage-memory device according to claim 14, wherein said ~~enabling-to-subject~~ partial-subjecting a portion of said high-bit portion comprises:

dividing a curve into a plurality of differential time zones, said curve related to a plurality of mapping values in said curve table;

generating a plurality of slope values according to said differential time zones; and

storing said slope values into said slope table for mapping ~~partial-a portion of~~ said high-bit portion.

18. (Original) The storage-memory device according to claim 17, wherein said curve comprises a gamma curve for gamma correction of said imaging system.

19. (Amended) The storage-memory device according to claim 14, wherein said ~~enabling-to-execute~~ step-of-said-calculating comprises-is-to-do multiplication with said factor and said low-bit portion.